What is claimed is:

[c1]   A diagnostic data aggregation and reporting system supporting analysis of
diagnostic data from one or more client diagnostic devices, the system
comprising:

   a) a system data store that stores diagnostic data; and

   b) a server processor in communication with the system data store and
   one or more client diagnostic devices, wherein the server processor:

      i) receives a diagnostic data set from a client diagnostic device,
      wherein the diagnostic data set represents results from the client
      diagnostic device running one or more tests on a test item having a
      test item type;

      ii) stores the received diagnostic data set in the system data store;

      iii) generates a report analyzing a subset of data from the system
      data store; and

      iv) outputs the generated report.

[c2]   The system according to claim 1, wherein the system data store has an
architecture selected from the group consisting of flat file, hash table, database
and combinations thereof.

[c3]   The system according to claim 2, wherein the system data store has a database
architecture.

[c4]   The system according to claim 3, wherein the database architecture has an
organization selected from the group consisting of object–oriented, relational,
spatial, hierarchical, object–relational and combinations thereof.

[c5]   The system according to claim 1, and further comprising:

      c) one or more system diagnostic devices, wherein the one or more
      system diagnostic devices are a subset of the client diagnostic devices in
      communication with the server processor.

[c6]
             The system according to claim 5, wherein the each of the one or more system
diagnostic devices comprises:

i) a testing device that runs one or more tests on a test item having a test item type; and

ii) a diagnostic processor that transmits diagnostic data sets resulting from test runs performed by the testing device to the server processor.

[c7]   The system according to claim 6, wherein each of the one or more system diagnostic devices further comprises:

iii) a diagnostic data store that stores diagnostic data sets resulting from test runs performed by the testing device associated with each respective system diagnostic device.

[c8]   The system according to claim 7, wherein the diagnostic processor of each system diagnostic device stores diagnostic data sets resulting from test runs performed by the respective testing device in the respective diagnostic data store.

[c9]   The system according to claim 7, wherein the testing device of each system diagnostic device stores diagnostic data sets resulting from test runs performed by the respective testing device in the respective diagnostic data store.

[c10]   The system according to claim 7, wherein the diagnostic processor of each system diagnostic device monitors the respective diagnostic data store for appearance of a previously untransmitted diagnostic data set and, upon appearance, transmits the previously untransmitted diagnostic data set to the server processor.

[c11]   The system according to claim 6, wherein each of the one or more system diagnostic devices further comprises:

iii) a diagnostic display device in communication with the diagnostic processor that displays diagnostic data sets resulting from test runs performed by the testing device.

[c12]   The system according to claim 11, wherein the diagnostic processor displays via the diagnostic display device a standardized interface for controlling the testing

device, wherein the standardized interface is based upon the test item type of a particular item being tested.

[c13]   The system according to claim 12, wherein the standardized interface is not based upon the testing device.

[c14]   The system according to claim 12, wherein the standardized interface is further based upon a particular malfunction associated with the particular item being tested.

[c15]   The system according to claim 12, wherein the diagnostic processor generates the standardized interface for display by communicating the test item type to the server processor, wherein the server processor upon receipt of the test item type creates the standardized interface and communicates the created standardized interface and wherein the diagnostic processor receives the created standardized interface.

[c16]   The system according to claim 5, wherein the one or more system diagnostic devices are in intermittent communication with the server processor.

[c17]   The system according to claim 17, wherein the server processor initiates intermittent communication with at least one of the one or more system diagnostic devices.

[c18]   The system according to claim 17, wherein one of the one or more system diagnostic devices initiates intermittent communication with the server processor.

[c19]   The system according to claim 5, wherein each system diagnostic device communicates with the server processor via a communication channel selected from the group consisting of computer network, direct serial or parallel connection, dial-up connection, wireless connection and bus connection.

[c20]   The system according to claim 14, wherein the communication channel is the Internet.

[c21]   The system according to claim 1, and further comprising:

       c) a script data store that stores at least one script containing instructions for use by client diagnostic devices for running tests.

[c22]   The system according to claim 21, wherein the script data store is in communication with the server processor and wherein the server processor communicates a script from the script data store to a selected subset of the one or more client diagnostic devices.

[c23]   The system according to claim 22, wherein the server processor receives one or more scripts from one or more diagnostic device manufacturers and stores the received scripts in the script data store.

[c24]   The system according to claim 22, wherein the server processor communicates at least one script on a periodic basis.

[c25]   The system according to claim 22, wherein the server processor communicates a selected script from the script data store to a particular client diagnostic device from among the client diagnostic devices.

[c26]   The system according to claim 22, wherein the server processor creates a new script for communication to a selected subset of the one or more client diagnostic devices, wherein the server processor creates the new script based upon a subset of diagnostic data in the system data store relevant to the selected subset of the one or more client diagnostic devices and an existing script in the script data store.

[c27]   The system according to claim 26, wherein the server processor stores the created new script in the script data store.

[c28]   The system according to claim 21, and further comprising:

       d) a script processor in communication with the script data store and one or more script-client diagnostic devices; and

wherein the script processor communicates a script from the script data store to a selected subset of the script-client diagnostic devices.

[c29]   The system according to claim 28, wherein the script processor creates a new script for communication to a selected subset of the one or more script-client diagnostic devices, wherein the script processor creates the new script based upon a subset of diagnostic data in the system data store relevant to the selected subset of script-client diagnostic devices and an existing script in the script data store.

[c30]   The system according to claim 1, wherein the system data store comprises a script data store that stores at least one script containing instructions for use by diagnostic devices for running tests.

[c31]   The system according to claim 30, wherein the server processor communicates a script from the script data store to a selected subset of the one or more client diagnostic devices.

[c32]   The system according to claim 30, and further comprising:
         c) a script processor in communication with the system data store and
         one or more script-client diagnostic devices; and
         wherein the script processor communicates a script from the script data store to
         a selected subset of the script-client diagnostic devices.

[c33]   The system according to claim 32, wherein the script processor creates a new script for communication to a selected subset of the script-client diagnostic devices, wherein the script processor creates the new script based upon a subset of diagnostic data in the system data store relevant to the selected subset of script-client diagnostic devices and an existing script in the script data store.

[c34]   The system according to claim 30, wherein the server processor creates a new script for communication to a selected subset of the client diagnostic devices in communication with the server processor, wherein the server processor creates the new script based upon a subset of diagnostic data in the system data store relevant to the selected subset of client diagnostic devices and an existing script in the script data store.

[c35]   The system according to claim 1, wherein the server processor polls one or more of the client diagnostic devices for new diagnostic data sets.

[c36]   The system according to claim 35, wherein the server processor polls one or more of the client diagnostic devices on a periodic basis.

[c37]   The system according to claim 35, wherein the server processor receives a request for a report and selectively polls one or more of the client diagnostic devices based upon the received request prior to generating the report.

[c38]   The system according to claim 1, wherein the server processor receives the diagnostic data set in a format selected from the group consisting of XML, SGML, XSL, HTML and combinations thereof.

[c39]   The system according to claim 1, wherein the server processor communicates with the client diagnostic devices via a communication channel selected from the group consisting of computer network, direct serial or parallel connection, dial-up connection, wireless connection, bus connection, and combinations thereof.

[c40]   The system according to claim 39, wherein the communication channel is the Internet.

[c41]   The system according to claim 1, wherein the server processor communicates with each client diagnostic device via a communication protocol selected from the group consisting of HTTP, HTTPS, FTP and SMTP.

[c42]   The system according to claim 1, wherein the server processor receives a request for a report.

[c43]   The system according to claim 42, wherein the received request comprises at least one criterion selected from the group consisting of item type, malfunction type, diagnostic device type, item manufacturer and specific test performed.

[c44]   The system according to claim 1, wherein the server processor generates reports on a periodic basis.

[c45]   The system according to claim 1, wherein the test item type is selected from the group consisting of hand-held electronic devices, medical devices and networking communications devices.

[c46]   The system according to claim 45, wherein the test item type is a type of hand-held electronic devices selected from the group consisting of mobile telephones, personal data assistants, and pagers.

[c47]   The system according to claim 45, wherein the test item type is a type of networking communications devices selected from the group consisting of switches, routers, modems, and broadband communication enabling devices.

[c48]   The system according to claim 1, wherein the server processor outputs the generated report to an end user display device.

[c49]   The system according to claim 48, wherein the end user display device is selected from the group consisting of a printer, an end user computer, and a selected client diagnostic device.

[c50]   The system according to claim 1, wherein the server processor outputs the generated report to a post-processing environment selected from the group consisting of a spreadsheet application, a database application, a test script development environment, a warranty claim processing environment, a warranty analysis processing environment and an insurance claim processing environment.

[c51]   The system according to claim 1, wherein the one or more client diagnostic devices comprises a plurality of diagnostic devices.

[c52]
          A computer-readable storage device storing instructions that upon execution by a server computer cause the server computer to aggregate and report diagnostic data from one or more client diagnostic devices supporting analysis of such aggregated data by performing the steps comprising of:

                    a) receiving a diagnostic data set from a client diagnostic device, wherein the diagnostic data set represents results from the client diagnostic

device running one or more tests on a test item having a test item type;

b) storing the received diagnostic data set in a data store;

c) generating a report analyzing a subset of data from the data store; and

d) outputting the generated report.

[c53]   The storage device according to claim 52, and storing further instruction that upon execution by the server computer cause the server computer to perform the step comprising of:

e) transmitting a script from the data store to a selected set of client diagnostic devices, the script containing instructions for use by the selected set of client diagnostic devices in running tests on test items having a test item type.

[c54]   The storage device according to claim 53, wherein the stored instructions that upon execution by the server computer cause the server computer to perform the step of transmitting a script comprise instructions that cause the server computer to transmit the script upon receipt of a request for an update from a particular client diagnostic device from among the selected set of client diagnostic devices.

[c55]   The storage device according to claim 53, and storing further instruction that upon execution by the server computer cause the server computer to perform the step comprising of:

f) generating a new script from a subset of diagnostic data in the data store relevant to the selected set of client diagnostic devices and an existing script in the data store; and

wherein the stored instructions that upon execution by the server computer cause the server computer to perform the step of transmitting the script comprise instructions that cause the server computer to transmit the script upon generation of the new script.

[c56]   The storage device according to claim 52, and storing further instruction that upon execution by the server computer cause the server computer to perform the step comprising of:

e) generating a new script from a subset of diagnostic data in the data store relevant to the selected set of client diagnostic devices and an existing script in the data store.

[c57]   The storage device according to claim 56, and storing further instruction that upon execution by the server computer cause the server computer to perform the step comprising of:

f) storing the new script in the data store.

[c58]   The storage device according to claim 52, and storing further instruction that upon execution by the server computer cause the server computer to perform the step comprising of:

e) polling one or more client diagnostic devices for new diagnostic data sets.

[c59]   The storage device according to claim 52, wherein the stored instructions that upon execution by the server computer cause the server computer to perform the step of outputting the generated report comprise instructions that cause the server computer to output the report to a post-processing environment selected from the group consisting of a spreadsheet application, a database application, a test script development environment, a warranty claim processing environment, a warranty analysis processing environment and an insurance claim processing environment.

[c60]   The storage device according to claim 52, wherein the stored instructions that upon execution by the server computer cause the server computer to perform the step of outputting the generated report comprise instructions that cause the server computer to output the report to an end user display device.

[c61]

The storage device according to claim 52, wherein the stored instructions that upon execution by the server computer cause the server computer to perform the step of generating the report comprise instructions that cause the server computer to generate the report based upon at least one criterion selected from the group consisting of item type, malfunction type, diagnostic device type,

item manufacturer and specific test performed.

[c62]   The storage device according to claim 52, wherein the one or more client diagnostic devices comprises a plurality of diagnostic devices.

[c63]   A method for diagnostic data aggregation and reporting supporting analysis of diagnostic data from one or more diagnostic devices, the method comprising the steps of:

a) receiving a diagnostic data set from a first diagnostic device, wherein the diagnostic data set represents results from the first diagnostic device running one or more tests on a test item having a test item type;

b) storing the received diagnostic data set in a data store;

c) generating a report analyzing a subset of data from the data store;

d) outputting the generated report;

e) receiving a received script, wherein the received script contains instructions for use in running tests on test items having a test item type by a set of diagnostic devices specific to the diagnostic device manufacturer;

f) generating a new script from a subset of diagnostic data in the data store relevant to a selected set of diagnostic devices, wherein the received script contains instructions for use by the selected set of diagnostic devices in running tests on test items having a test item type;

g) storing scripts, received and generated, in the data store; and

h) transmitting a selected script from the data store to a second diagnostic device for which the selected script would be relevant.

[c64]

A computer-readable storage device storing instructions that upon execution by a computer cause the computer to manage a diagnostic device by performing the steps comprising of:

a) monitoring a data store associated with the diagnostic device for the appearance of a diagnostic data set, wherein the diagnostic data set results from the diagnostic device running one or more tests on a test item having a test item type; and

b) upon detecting the appearance of the diagnostic data set in the data store, transmitting the diagnostic data set to an aggregation server.

[c65] The storage device according to claim 64, and storing further instruction that upon execution by the computer cause the computer to perform the step comprising of:

c) receiving at least one script from the aggregation server, wherein the received script contains instruction for use by the diagnostic devices in running tests on test items having a test item type and storing the received script in the data store.

[c66] The storage device according to claim 65, and storing further instruction that upon execution by the computer cause the computer to perform the steps comprising of:

d) receiving a test item type associated with a test item connected to the diagnostic device; and

e) generating a standardized interface for testing the connected test item based upon the received item type and a script in the data store associated with the received item type.

[c67] The storage device according to claim 66, wherein the stored instructions that upon execution by the computer cause the computer to perform the step of generating the standardized interface comprises instructions that cause the computer to generate the standardized interface independent without regard to a diagnostic device type.

[c68] The storage device according to claim 64, and storing further instruction that upon execution by the computer cause the computer to perform the steps comprising of:

c) receiving a test item type associated with a test item connected to the diagnostic device; and

d) generating a standardized interface for testing the connected test item based upon the received item type.